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ABSTRACT

The California community colleges are given state support to develop Employer-Based Training (EBT) programs. These programs address the economic development needs of local communities by offering training in new technologies, restructuring programs to meet industry needs, offering courses in starting a business to meet the needs of small firms, and participating as partners with local business and industry. In 1987-88, 32 EBT projects were funded, including five small business assistance/development, five economic development, nine new technology, four private sector, and nine combination new technology/private sector projects. Available data on these programs indicate that: (1) 68% of the participants were White, 16% Hispanic, 13% Asian, and 5% Black; (2) 65% of the participants were male; (3) while women and Hispanics were least likely to be employed prior to training, they were most likely to complete the training and demonstrated the greatest gains in obtaining employment after training; (4) most colleges had to remodel facilities to accommodate the project and most had to purchase or update equipment; and (5) 18 projects provided career counseling and/or assessment, 15 provided job placement assistance, 9 provided remedial instruction, and 6 provided mentoring. The report provides brief descriptions of the EBT projects. (ALB)

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# ON COURSE

A Report to the Legislature
on the
Employer-Based Training Program
1987-88

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David Mertes, Chancellor

**Employment Training Unit**

JC 890 288

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# A REPORT TO THE LEGISLATURE ON THE EMPLOYER-BASED TRAINING PROGRAM, 1987-88

The Chancellor's Office, California Community Colleges, provides support to the community colleges for new programs serving employers through funding Employer-Based Training (EBT) programs. EBT programs have been funded since 1982. The intent of this program is to provide and expand employer-based training, new technology programs, support business growth and economic development and, at the same time, leverage the provision of matching resources for these efforts.

## *EBT PROGRAM GOALS*

- ***To provide training to individuals in occupations leading to employment in growth industries.***
- ***To provide training in new and emerging technologies.***
- ***To provide training assistance for small businesses.***
- ***To provide support for community colleges to expand their role in economic development in their communities.***
- ***To secure a deeper commitment and involvement in employment training programs from private sector business and industry.***
- ***To institutionalize and expand employer-based training in community colleges.***
- ***To provide sufficient flexibility for colleges to respond to local needs in a variety of forms.***

## Major EBT Program Components

### New Training Programs in New Technologies

The new training programs in new technologies component provides EBT funds to be matched by other sources for programs which are new to the community college service area or designed to meet new or changing job opportunities, are in new or emerging technological fields, and have the support of other public resources.

### Private Sector Employer Oriented Training

The private sector employer oriented training component provides EBT funds to be matched by the private sector for specialized training programs established by colleges to meet current and imminent job demand in geographical areas experiencing significant business growth.

### Training in Support of Business and Economic Development

The training in support of the business and economic development component provides EBT funds to be used for community college training programs targeted at small businesses or in support of economic development. They are to be coordinated with the California Department of Commerce, local economic and business development entities, and other agencies and their resources which are available for small business assistance or for support of economic development activities.

### Set-Aside for Economic Development Assistance

A joint agreement between the Chancellor's Office, California Community Colleges, and the California Department of Commerce serves the training needs of new business and entrepreneurs expanding or starting a business in California. Up to one million dollars from the Chancellor's Employer-Based Training program has been set aside to assist community colleges in offering training and educational services to newly locating businesses, expanding businesses or new business start-ups.

## General Criteria for Eligibility of Funds

To be funded a program must strive:

- To prepare a student for advancement or training and job opportunities which lead directly to jobs which have advancement potential.
- To upgrade the skills of workers who possess obsolete or inadequate job skills or who carry entry level positions with few advancement opportunities.
- To recruit unemployed or underemployed persons to participate in the program.
- To promote gender equity and improve programs and/or services for the disadvantaged, AFDC recipients, handicapped, limited English-speaking and others with barriers to employment.
- To demonstrate the involvement of business, industry and labor by their participation in development and their provision of resources to support the program.
- To coordinate with and use federal, state or local financial resources where feasible.
- To show a strong labor market demand for the training and services proposed.

- To obtain an 80-90% completion rate with attrition primarily due to employment and have commitment from employers to hire at least 75% of the successful completers.
- To provide training which is short term and generates ADA.
- To supplement and not supplant existing offerings.
- To work to integrate worksite skills and classroom training.
- To provide a plan for program self-support to continue after the term of the grant.
- To evaluate the program outcomes and follow up students and their job placement.
- To disseminate the project results.

## *FINANCIAL SUMMARY OF EBT PROGRAMS, 1987-88*

Thirty-two projects were funded in 1987-88. Funding for the projects came primarily from three sources: State funding made available for EBT through ADA allocations, local district resources, and private sector resources. In addition, some projects used resources from other state and federal monies, such as funds from the Vocational Education Act (VEA), Job Training Partnership Act (JTPA), Greater Avenues for Independence (GAIN), and economic development agencies.

Private sector support was in the form of equipment donations, funds, supplies, personnel, and use of facilities. The funded community colleges provided resources through faculty and support staff salaries and benefits for instruction, curriculum development, counseling, tutoring, and job placement; administrative services; instructional supplies; utilities; facility remodeling; and equipment installation.

| | |
|---|---|
| **$3,900,000** | **EBT** |
| **$ 127,282** | **VEA** |
| **$ 475,378** | **JTPA, GAIN, OTHER** |
| **$2,573,137** | **PRIVATE SECTOR INDUSTRIES** |
| **$1,596,298** | **LOCAL COMMUNITY COLLEGES** |
| **$8,672,095** | **COMBINED RESOURCES FOR EBT IN 1987-88** |

EBT Funding, 1987-88

Figure 1

EBT, 45¢ | Private Sector, 29.7¢ | Local Community Colleges, 18.4¢ | JTPA, Gain, Other, 5.4¢ | VEA, 1.5¢

## *FACTORS IN SUPPORT OF EBT PROGRAMS*

The Basic Agenda, 1988-89, for the Board of Governors, California Community Colleges addresses **educational excellence** in reaffirming the mission of the community colleges.

It cites the implications posed by the rapidly increasing rate of technological change which impact vocational education and retraining programs and the need for state-of-the-art programs that are sufficiently flexible to respond to the "needs of older, employed students and the special requirements of local business and industry." It calls for an "active, recognized role for the colleges in economic planning and development in their service areas."

The solutions proffered are that the "Board and the Chancellor will continue to strengthen the vocational education function by encouraging community colleges to seek the advice and assistance of business and industry in (a) modifying and developing education and retraining programs to respond quickly and effectively to the demands of the labor market, (b) providing expert staff instruction and skills training to respond to the demands of technological change, and (c) devising long-range planning and evaluation strategies that will maintain the currency and vitality of vocational education and training." Further, they "will seek the resources needed to encourage and enable colleges to participate in and contribute their academic and staff knowledge and expertise to economic planning and development activities in their local communities and service areas."

The EBT program addresses these needs through offering training in new technologies, effective restructuring of programs to meet industry needs, offering courses in business start up to meet small business needs, participating as partners with local business and industry in economic development of an area by effective use of the economic development set-aside. Although each project funded in 1987-88 is described later in this report, it is appropriate to highlight several projects to illustrate how EBT programs address the solutions posed in the Board of Governors' Agenda.

### NEW TRAINING PROGRAMS IN NEW TECHNOLOGIES

#### Example: Orange Coast College—Computer Automated Manufacturing (CAM)

The growth of CAM in industry is a result of 1) the competitive pressures caused by increasing product sophistication and the inability to locate skilled people which forces industry to seek new solutions and 2) computer machining suppliers who continue to provide users with increasing numbers of new tools which allow them to accomplish tasks more quickly, increase productivity, and reduce time to bring a product to market. Orange Coast College upgraded the hardware and software used to teach CAM as a result of EBT funding. They expected to enroll 300 for training and had 549 enroll, complete and continue to be employed in their respective companies. Success was related to increased communication with local industry and the level of sophisticated technology the college could provide.

***They expected to enroll 300 for training and had 549 enroll, complete and continue to be employed in their respective companies.***

### PRIVATE SECTOR EMPLOYER ORIENTED TRAINING

#### Example: Foothill College—Computer-Integrated Manufacturing (CIM) in the Semiconductor Industry

To survive international competition, semiconductor companies know they must improve continuously their productive processes to increase the number of working chips from each silicon wafer, cut the time to make chips and improve design time of new products. CIM is the process which can accomplish this. Foothill College working directly with Advanced Micro Devices (AMD) provided training for 125 persons to facilitate the development of CIM in the semiconductor industry. There has been excellent feedback from the employees involved in the project and the effect on productivity has been extremely positive—so much so, the program is now considered a model for other AMD manufacturing areas.

### Example: College of the Desert—Hospitality Industry Partnership

The hospitality industry provides the economic and employment base for the entire Coachella Valley. The available workforce was generally unskilled and had significant language and communication problems, the turnover rate was as high as 11 percent per month and some companies were forced to bus employees from out of the area in order to staff their hotels. College of the Desert, working directly in partnership with the local hospitality industry, designed instructional modules and trained 192 workers, 70 percent of which were Hispanic. Job placement assistance was provided and 94 percent are currently working in jobs related to their training. The local residents found employment and the industry solved a critical need.

*The local residents found employment and the industry solved a critical need.*

### Example: Three Health Care Programs
### Southwestern College—Surgical Technology
### Modesto Junior College—Respiratory Therapist
### Mt. San Antonio College—Registered Nurse Reentry

The health care industry has a multitude of problems —escalating costs, patients who need sophisticated health care, lack of trained personnel, and changing technology. The three programs cited above each took a different approach to addressing the critical problems of the industry.

All of these programs applied new technology in their instruction and established close partnerships with the industry. Southwestern instituted a new program of surgical technology in which trained technologists could assist surgeons after a one-year training program which required few prerequisites. The Modesto program addressed a need to upgrade respiratory technicians to therapists to make them employable in the field which has raised its standards for employment. Mt. San Antonio facilitated reentry of nurses who had left the field and helped to reduce the critical shortage of nurses.

## TRAINING IN SUPPORT OF BUSINESS AND ECONOMIC DEVELOPMENT

### Example: Solano Community College—Solano County Small Business Center

Solano Community College was able in cooperation with local economic development agencies, the State Department of Commerce, the local PIC and county chambers of commerce to bridge regional turfdom and meet a need for coordinated small business services. The college expected to serve at least 400 persons through short, modular courses related to business start up. The workshops and short-term courses drew 916 participants by November and additional workshops were scheduled and subscribed. Consultations were also provided to prospective and new business developers. Dynamic leadership and coordination in these types of projects are key to success.

Small business centers are experiencing a strong demand for short courses related to international trade, importing and exporting. See De Anza College's program description for an example of courses exceeding expectations.

## SET-ASIDE FOR ECONOMIC DEVELOPMENT ASSISTANCE

### Example: Victor Valley College—Employee Training for AFG Industries

For the first time, part of the EBT funds were set aside for economic development. These funds were to serve the training needs of new businesses and entrepreneurs expanding or starting a business in California. Funds were provided to Victor Valley College to assist a new industry located within the service area. The company, AFG, needed a trained workforce to make the plant location feasible. The college gave pre-employment training to 468 potential employees; post-employment training was given to 230 persons who were hired from the pre-employment training group. The employees, the college and the company were very pleased with the results. Flexibility to respond quickly to an employer's needs, total and close cooperation between the college and the employer, and a responding community joined together to increase the economic base of the community.

As a result of these efforts EBT programs have demonstrated the ability of colleges:

- **to improve industry's competitiveness**
- **to improve employment opportunities for trainees**
- **to provide ongoing programs and support services to communities which help start, build and sustain business growth and economic development.**

## *EBT PROGRAM COMPONENTS*

The following charts indicate the proportion of hours generated, ADA generated, and trainees enrolled in the training components of EBT projects. There were five each economic development and small business center projects. The rest of the projects (22) were either new technology or private sector projects or a combination of the two.

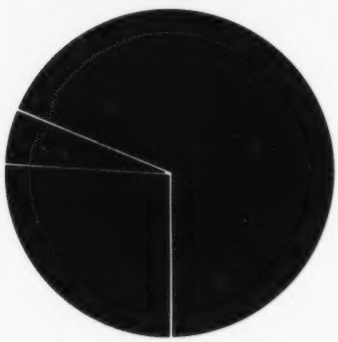
Although 15 projects were extended and all data are not complete, most data were available for 17 new technology/private sector projects, 2 economic development projects and 4 of the small business center projects. In all, 123,200 hours, 184 ADA, and 5,494 trainees were identified.

As can be seen by reviewing the charts, small business centers generate few ADA or hours, but account for over half the enrollments. This can be accounted for by the fact that short courses/modules or workshops were the primary method of information delivery used in the centers. On the other hand, intensive training courses with job site experiences was the method employed to deliver new technology/private sector projects. Economic development was a combination of delivery modes. The 2 projects completed used intensive training experiences to ready new employees for new businesses being established in an area.

ADA Generated by
EBT Projects, 1987-88

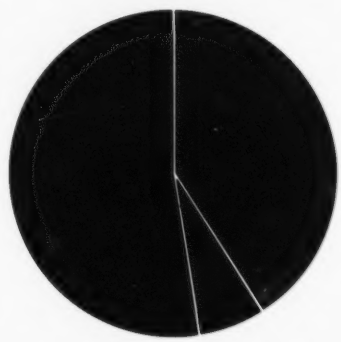
65.8% New Technology/Private Sector
30.1% Economic Development
4.1% Small Business Centers

Hours Generated by
EBT Projects, 1987-88



68.5% New Technology/Private Sector
26.0% Economic Development
5.5% Small Business Centers

Trainees Enrolled in
EBT Projects, 1987-88



38.8% New Technology/Private Sector
9.3% Economic Development
51.9% Small Business Centers

# *PARTICIPANTS AND PROGRAM OUTCOMES*

Although 5,494 program participants were identified in the projects that were complete or in process, not all data describing those participants were available. The small business center projects did not have data describing their 2,852 short-course and workshop participants. Individual interviews with personnel from three of the five small business center projects indicated that many women made use of these programs to facilitate entry into their own businesses. Minorities also used the resources of these programs. The design of the programs—short-term modules, delivered in the evening, on Saturdays or in later afternoon—make them readily available. The centers' staff are service oriented. The course content is oriented toward new business start up and is problem solving in approach.

One of the reasons given for women entering into business on their own is that they have hit the "glass ceiling" in their current jobs and can see no further upward mobility opportunities. The "glass ceiling" refers to the phenomenon of being able to see the top but unable to reach it because of invisible barriers which impede upward movement. Women re-entering the job market also use these small business resources to establish new businesses which will allow them to become economically viable.

***Women and Hispanics were proportionately least likely to be employed prior to training, most likely to finish, and showed the greatest gain in employment.***

***Women re-entering the job market also use these small business resources to establish new businesses which will allow them to become economically viable.***

## Program Outcomes for 19 Programs

Nineteen (19) EBT programs in new technology, private sector and economic development did have complete data describing their enrollees, completers and the employment of their participants, before and after training.

These 19 program outcomes appear on the table seen below and on the six bar charts (opposite page).

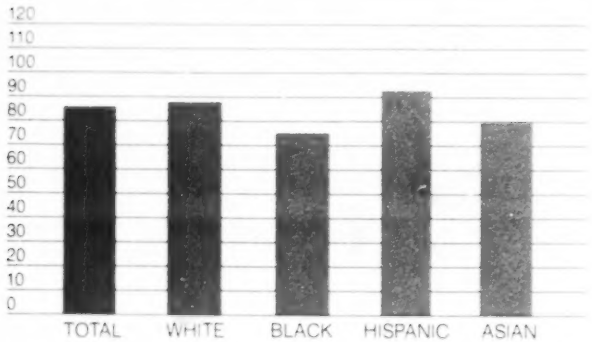
- Most participants were White (68%) and male (65%).
- Few Blacks participated (5%).
- Hispanics comprised 16% and Asians 13% of the trainees.
- Women and Hispanics were proportionately least likely to be employed prior to training, most likely to finish, and showed the greatest gain in employment.
- Asians were the most likely to be employed prior to training, and along with Blacks the least likely to complete, but had the highest rate of employment after training.

| Trainee | Total | Female | Male | White | Black | Hispanic | Asian |
|---|---|---|---|---|---|---|---|
| Total Enrolled | 1,847 | 592 | 1,255 | 1,199 | 89 | 304 | 233 |
| Completed Training | 1,597 | 534 | 1,063 | 1,047 | 66 | 277 | 184 |
| Employed at Start | 969 | 221 | 748 | 629 | 50 | 83 | 191 |
| In Related Job After | 1,394 | 415 | 979 | 864 | 56 | 229 | 217 |

PROGRAM OUTCOMES FOR 19 EBT PROGRAMS IN
NEW TECHNOLOGY, PRIVATE SECTOR
AND ECONOMIC DEVELOPMENT

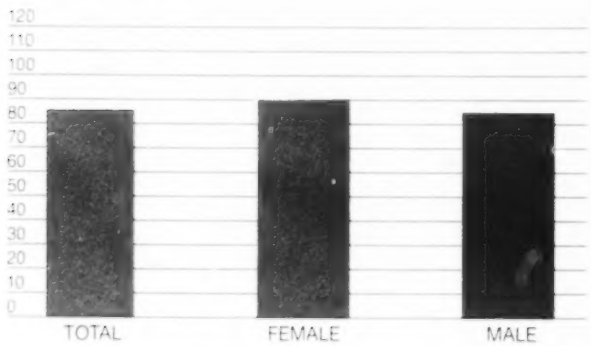
## Completers EBT Programs

By Ethnic Group, 1987-88



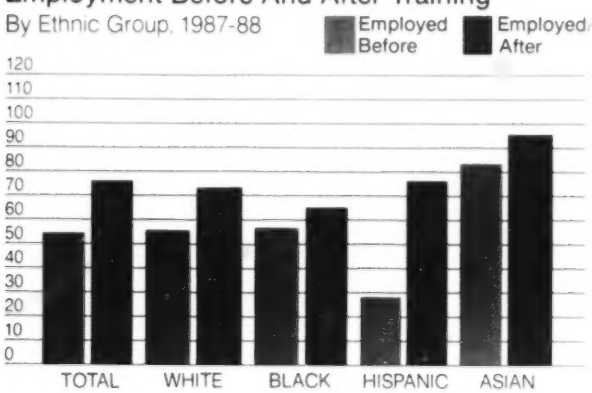

## Completers EBT Programs

By Sex, 1987-88



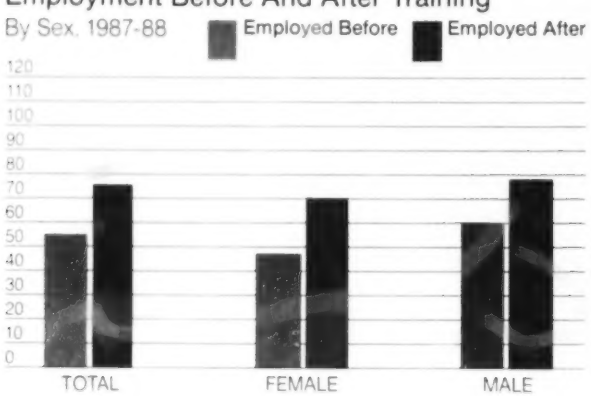

## Employment Before And After Training

By Ethnic Group, 1987-88



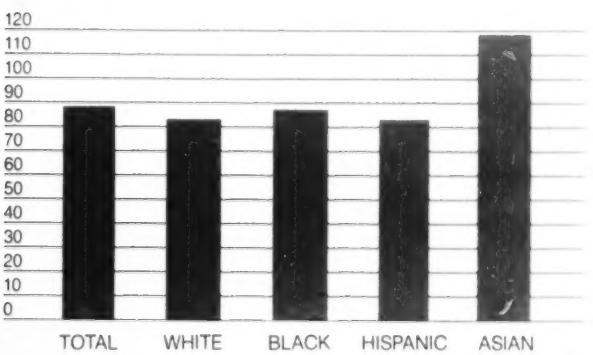

## Employment Before And After Training

By Sex, 1987-88



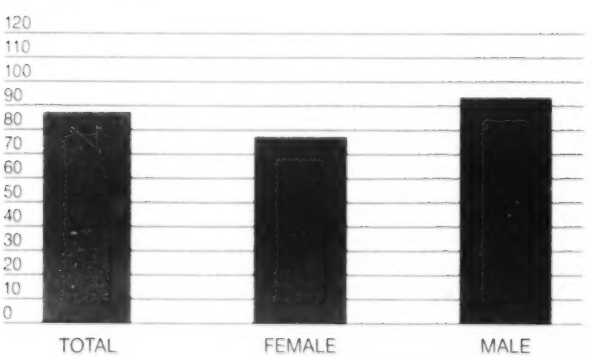

## Employed After As % Completers

By Ethnic Group, 1987-88




## Employed After As % Completers

By Sex, 1987-88



### Equipment and Facilities

Twenty-five (25) projects were sufficiently completed to report data on equipment and facilities.

- 22 of the 25 used existing facilities; however, 15 had to remodel these facilities to accommodate equipment change.
- 20 programs used new equipment in their programs and 12 of these also updated current equipment.
- 17 programs used equipment and 11 used facilities from the private sector to deliver programs.

### Support Services Provided To Trainees

Twenty-two (22) projects identified support services they provided for their trainees.

- 18 provided career counseling and/or assessment.
- 15 provided job placement assistance.
- 9 provided remedial instruction.
- 6 provided mentoring for trainees.

### Future Plans and Institutionalization

Twenty-seven (27) projects identified the results of the program offerings and their plans for future offerings.

- 21 had curriculum related to the program available for others.
- 16 had institutionalized the programs as regular course offerings.
- 16 planned to offer future courses in the programs.
- 14 planned to offer new related courses.
- 13 would continue to offer the training to the same companies.
- 13 would offer the training to new companies.
- Only 3 offered the program on a one-time basis.

### Rating the Success of the Projects

Twenty-five (25) projects were sufficiently complete to rate the success of the project:

**Fifteen rated them excellent, 9 rated them good, 1 satisfactory. In total 96 percent rated their programs excellent or good; none rated them needing improvement or poor.**

## *EBT PROGRAM BENEFITS, BARRIERS AND TRENDS*

Although each of the components has benefits and barriers to implementation for EBT projects for local and state interests, the small business center benefits, barriers and trends appear to differ more distinctly from the other three components—new technology, private sector, and economic development. Therefore two separate lists are presented here. One for employer-based training and economic development and one for small business centers. These lists were developed as a result of roundtable discussions at the "Futures in Employment Training" workshops held in November, 1988, in San Francisco and Los Angeles.

## EMPLOYER-BASED TRAINING AND ECONOMIC DEVELOPMENT

**Benefits:**

Community college EBT programs—

- Strengthen the role of education in the community college and provide economic development for the community.
- Can design a program for a specific need.
- Are cost effective, diversified, flexible, and available; have rapid response; are mobile; and have high quality offerings.
- Meet emerging needs of industry, new needs not before encountered.
- Link multiple types of activities such as employer-based training, contract education and inservice with a single industry for different kinds of activities leading to success for all.
- Provide linkage with industry which helps keep curriculum and equipment in educational programs current, state-of-the-art.
- Improve the quality of life for training recipients through jobs that have advancement opportunities.
- Improve student interaction with industry as stronger linkages are built.
- Bring the community closer to the college; college/community relationships are improved.
- Provide the community with a different resource which better meets some needs of the employer.
- Establish stronger partnerships with the private sector as positive learning experiences occur and quality programs are delivered.

**Barriers:**

EBT program successes are hindered because—

- There is no state policy for the role of the community college in economic development and insufficient funds for its development are allocated.
- No provision exists for state staff to administer and monitor the program.
- Some programs lack commitment by community college management.
- Community college boards are uncertain of their role in economic development.
- Some programs are not supported by a job development function within the community colleges.
- Once a year funding for EBT and uncertainty of a proposal being funded reduce opportunities to meet some employers needs.
- Inadequate funding is available to meet economic development needs and flexibility is lacking to access economic development set aside funds.
- Company commitments are not always from the top down.
- There is the difficulty of acting quickly in a system that is sluggish.
- Response time to meet an industry's need puts great pressure on the college to assure quality vs. loose instruction.
- Regulations regarding the certification of instructors and policies related to full-time contract instructors inhibit flexibility.
- Some institutions ignore regular faculty as a resource.
- Not all programs are addressing the needs of minority populations.
- Some faculty is complacent and resists new approaches to instruction.

**Trends:**

As a result of EBT programs, colleges are

- Providing greater commitment for EBT programs and economic development.
- Finding companies are recognizing that better educated employees are more flexible employees.
- Seeing more requests coming from small companies on a one-time basis.
- Seeing large as well as small companies moving toward community college training support and away from inhouse training.
- Receiving increasing requests from companies for multiple types of training and assessment.
- Using quality curricula in new technologies in state-of-the-art programs.
- Improving networking with a variety of partners.
- Understanding that top programs have institutional commitment and adequate staffing to deliver top quality.
- Experiencing greater cooperation among community colleges leading toward consortia approaches to delivery of programs.

*Oxnard College — BMW Auto Mechanic Training.*

## COMMUNITY COLLEGE SMALL BUSINESS CENTERS

**Benefits:**

Community college small business centers sponsored through EBT grants—

- Help small businesses get assistance they need.
- Increase competence in the local labor force.
- Reduce business failures and save jobs for people in the area.
- Identify new or additional businesses needed in the area.
- Provide a place for businesses to come together.
- Extend the presence of the college in the community and increase the credibility of the college by offering tangible help to the community.
- Help market what the college business division is doing.
- Keep colleges and businesses up-to-date.
- Have the advantages of a training supermarket—one-stop training.
- Match community college resources to needs.
- Help support contract education.
- Offset the costs of existing services—act as incubators.

**Barriers:**

Community college small business centers' successes are hindered because—

- Their continuance from one year to the next is exceedingly uncertain.
- The State of California has not adequately defined economic development, the role of small business centers and the role of the community colleges in the center development.
- There is a lack of recognition of a community's need for small business services by the colleges.

***Extend the presence of the college in the community and increase the credibility of the college by offering tangible help to the community.***

*Roundtable discussion on Small Business Centers, The 1988 Workshops.*

- Local boards of trustees and college staff are not always supportive of the concept because they don't see it as part of the college mission.
- There is not enough money available through regular ADA channels because most colleges are at cap.
- The ADA cap works against increasing enrollment in short courses, serving an identified need.
- Center staff has to constantly work to obtain various sources of funding and is unable to devote full time to running the center.
- Top-notch directors and coordinators are needed to make centers work and are difficult to retain on uncertain funding.
- Multiple funding sources and a variety of reporting requirements complicate the delivery system.
- Bureaucracy of some colleges slows and diminishes flexibility.
- Turf conflicts occur with both colleges and companies.
- District personnel policies and collective bargaining agreements restrict consulting/instructional delivery flexibility.
- Insufficient promotion has been done by the Chancellor's Office.

**Trends:**

Community college small business centers are—

- Increasing their visibility with the rest of college as the importance of the small business centers to the community and the college is recognized.
- Becoming more proactive and international in focus.
- Encouraging boards to recognize the need to approve economic development policy.
- Developing models for other colleges to implement.
- Reducing business failures through competent technical consulting assistance.
- Offering short-term, one-half unit modules and workshops on a variety of topics related to business start up, exporting and importing.
- Operating in soft money arenas with increasing costs.
- Finding it a continuing problem to find instructional resources to provide diversified curriculum in many areas.
- Obtaining start-up funds from many sources and then attempting continuation through contract education with larger firms that can pay for training and services.
- Linking with other economic development agencies.

## *THE EMPLOYER-BASED TRAINING PROJECTS 1987-88*

Thirty-two projects (see following page) were funded for FY 1987-1988. Four components existed as funding categories: new technology (NT), private sector (PS), small business (SB) and the set-aside for economic development (ED). Some projects fell into more than one component category. The projects are listed with the component(s) under which they were funded. Starred (*) projects are not complete.

Of the 32 projects funded for 1987-88, 15 were extended beyond September 30, 1988. Although data on these on-going projects are incomplete, each project is described, participating companies identified and outcomes to date included. All projects had support from private business and industry and all enrolled trainees/clients in some aspect of training as a result of funding.

**5 were small business assistance/ development projects.**
**5 were economic development projects.**
**9 were new technology projects.**
**4 were private sector projects.**
**9 were a combination of new technology and private sector projects.**

***Becoming more proactive and international in focus.***

***Reducing business failure through competent technical consulting assistance.***

# THE EMPLOYER-BASED TRAINING PROJECTS 1987-88

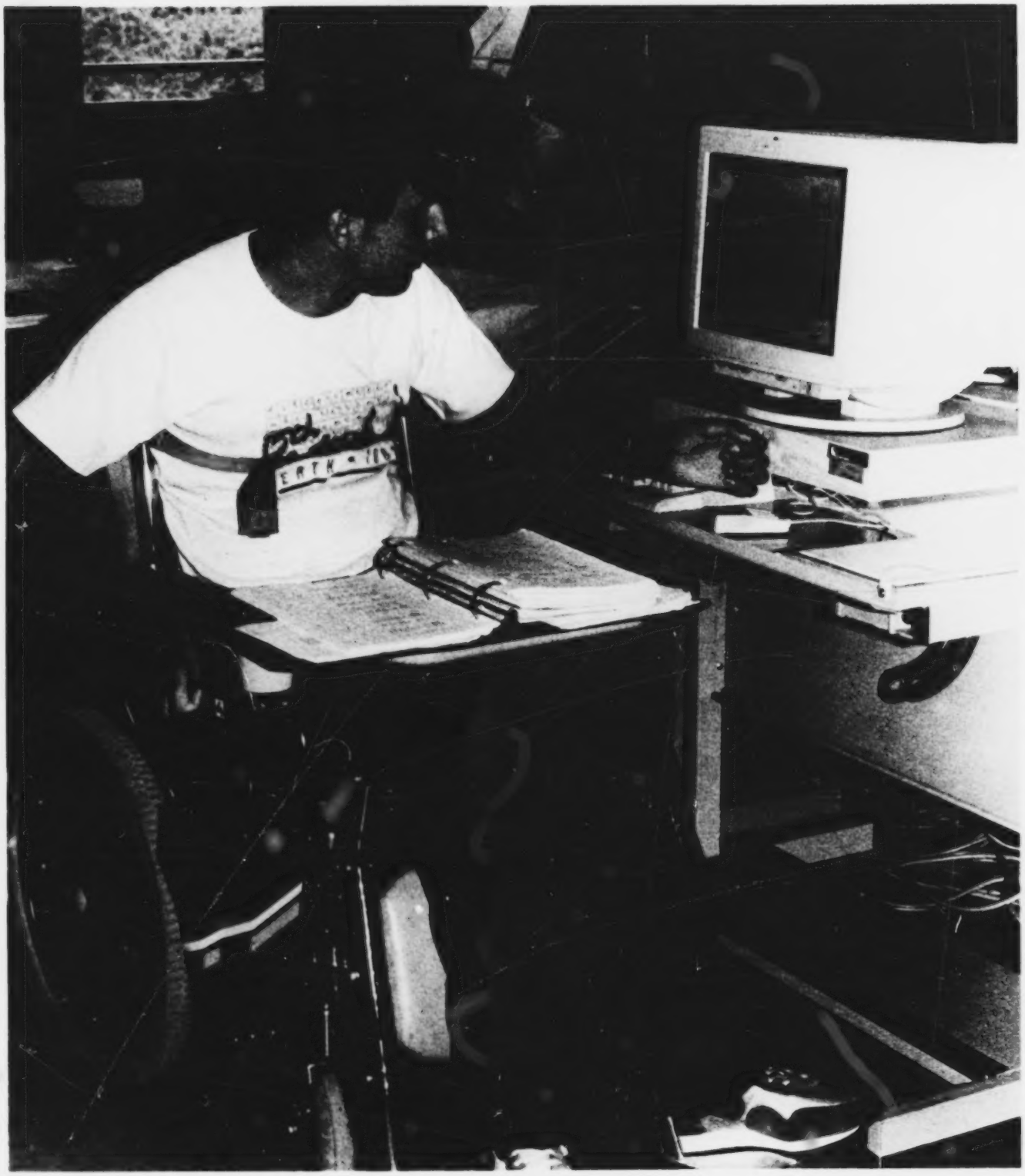
| College | Project Title | Component |
|---|---|---|
| Antelope Valley College & Cypress College | Desktop Publishing and Computer Graphics | NT |
| College of the Desert | Hospitality Industry Partnership | PS |
| College of the Redwoods | Automotive Computer Control Systems Service/Repair | NT |
| De Anza College* | Small Business Growth & Community Economic Development | SB |
| Diablo Valley College* | Electronics/Telecommunications Training | NT PS |
| Foothill College* | Computer-Integrated Manufacturing in the Semiconductor Industry | PS |
| Foothill College* | Personal Computer Service Technician Training | NT |
| Fresno City College* | Minority Entrepreneur Small Business Incubator | SB |
| Fullerton College | Automotive Training Center | ED |
| Irvine Valley College | Interactive 3D Computer Aided Design & Manufacturing Training | NT |
| Lake Tahoe College* | Small Business Improvement Center (SBIC) | SB |
| Modesto Junior College | Respiratory Therapy Technician Upgrade to Therapist | NT PS |
| Moorpark College | Upgrade & Retraining for Phototypesetting Workers | PS |
| Moorpark College | Laser Technology Applications in New Aircraft Navigation Systems | NT |
| Mt. San Antonio College* | Registered Nurse Re-Entry Program | PS |
| Napa Valley College* | Training in Photoprocessing Technology | NT |
| Napa Valley College* | Training for Rural Small Business & Economic Development | SB |
| Ohlone College* | Desktop Publishing Project | NT |
| Orange Coast College | Computer Automated Manufacturing | NT |
| Oxnard College | BMW Auto Mechanic Training | ED |
| San Diego City College | CNC/EDM Tool & Die Plastic Injection Mold Making | NT PS |
| San Diego City College | Automotive Computer Transmission Controls | NT PS |
| San Diego City College | Electronic Drafting for the Handicapped | NT PS |
| Santa Barbara City College* | Telecommunications Training in Electronics/Computer Technology | NT |
| Santa Barbara City College* | Cooperative Training Partnership with Tracor Aviation | ED |
| Skyline College* | Telecommunications Fiber Optics Technology | NT PS |
| Solano Community College* | Solano County Small Business Center | SB |
| Southwestern College | Surgical Technology | NT PS |
| Southwestern College* | Developing an International Business Institute | ED |
| Taft College | Instrumentation Technician Training Program (Phase 2) | NT PS |
| Victor Valley College | Employee Training for AFG Industries | ED |
| West Los Angeles College | Laser Fiber Optic Electronics Project | NT PS |

*Project not completed; on-going.
NT New Technology
PS Private Sector
SB Small Business
ED Economic Development

**The person who says it can't be done should not interfere with the one who's doing it.**

—From CABLE DATA

# THE INDIVIDUAL PROJECT DESCRIPTIONS



*San Diego City College — Electronic Drafting for the Handicapped Project.*

## ANTELOPE VALLEY COLLEGE
**Lancaster, California**

## CYPRESS COLLEGE
**Cypress, California**

*Desktop Publishing and Computer Graphics*

Advances in computer aided graphics have progressed to the point that most computer work stations in the field supporting publication processes are interactive. Within the last two years changes in printing and publication development have created a need to train graphic designers in the use of computers as their major design tool. Businesses using cut and paste-type procedures are undergoing extensive modification in their production operations and companies are upgrading their production processes to utilize current and emerging technologies.

If companies are to be able to compete effectively, they must convert to the use of advanced graphic and printing technologies. Tabloids estimate effective new techology publishing and graphic systems can save almost 75 percent of production costs.

This project involved the experienced computer design staff of two colleges, Antelope Valley and Cypress, in cooperation with employers located within their respective regions. The employers who joined the consortium were selected on the basic of two criteria: they had already automated their production-design procedure to a computer-based system or they were in the process of altering their design and production systems to such a format.

### Participating Companies

Disneyland—Antelope Valley Press—Cypress Printing—St. Joseph Hospital

### Outcomes

New courses were developed and two new certificated programs resulted. Two sections, one at each college, were offered for 23 students. Twenty (20) of them are working in jobs related to their training.

The private sector companies provided advisement for planning, implementing and evaluating the programs. They hired new graduates and served as a network for industry contacts. The program was judged by participants to be overwhemingly successful in opening a new vocational area and allowed for expensive equipment to be purchased which will have long-range program results in graphic design. Curriculum developed is available for others to use.

## COLLEGE OF THE DESERT
**Palm Desert, California**

*Hospitality Industry Partnerships*

Accelerated growth in the Coachella Valley has led to an explosion of new development in the hospitality industry. The number of hotel rooms will double in the next two years. This industry provides the economic and employment base for the entire area. The available workforce was generally unskilled and had significant language and communication problems; the turnover rate was as high as 11 percent per month at some sites. Marriott was forced to bus employees from Orange County to staff its desert hotel.

College of the Desert created a number of partnerships with local industry to address the problem. As part of its efforts the college conducted a comprehensive needs assessment survey for the hospitality industry in the Coachella Valley. The survey documented the hospitality industry's support for training programs at the college and indicated it welcomed the opportunity to work with the college through the contract education mode.

### Participating Companies

Marriott—Hyatt—LaQuinta Hotel—Ramada Inn—Maxim's de Paris Suite Hotel—Club Managers Association—Hotel Sales Managers Association

### Outcomes

The college designed and produced 11 instructional modules and implemented instruction for 192 persons, 70 percent of which were Hispanic. Ninety-four (94) percent of the students are working in jobs related to their training. Modules were offered in pantry preparation, housekeeping and mid-management. The instructional modules are packaged for dissemination and are available to other colleges.

Private sector companies assisted in assessing training needs, provided assistance in curriculum development and sponsored the courses through contract education. Job placement assistance was provided for students which kept their motivational level high. The College of the Desert has formed a strong partnership with the local hospitality industry.

## COLLEGE OF THE REDWOODS
**Eureka, California**

### *Automotive Computer Control Systems Service & Repair*

The field of automotive service and repair has changed dramatically in recent years. An understanding of electronics and computer technology is required to repair late model vehicles. Technicians on the California north coast did not have this expertise and factory training centers were located over 300 miles away.

The College of the Redwoods worked with the local automotive industry to update its automotive technology program to meet the changing needs for training and employment in the industry.

**Participating Companies**

Local automobile agencies and repair shops.

**Outcomes**

The college designed new evening short courses so that working technicians could upgrade their skills. In addition, four semester-length courses have been restructured to integrate computer technology in the training. Fifty (50) persons are expected to receive training during the first full year with the upgraded curriculum. The local automotive industry provided guest lecturers, local businesses donated equipment to the project and referred their personnel to the college for updated training. As a result of these efforts, partnerships with the local industry have been strengthened and students have been placed with local employers. Materials developed are available for other colleges.

***The local automotive industry provided guest lecturers, local businesses donated equipment to the project and referred their personnel to the college for updated training.***

## DE ANZA COLLEGE
**Cupertino, California**

### *Small Business Growth & Community Economic Development*

Educational institutions with programs focused on small businesses rarely direct their attention to business expansion. In addition, international trade plays a significant economic, cultural and social role in California. In the San Francisco Bay Area, including Santa Clara County, over 10 percent of all nongovernmental jobs are related to international trade. Approximately $3.5 billion in taxes and $35 billion in business revenue are brought to California by international business and trade. Understanding of international trade and multicultural issues by local businesses is severely lacking. The fact that 80 percent of the exports are conducted by 10 percent of the businesses in America illustrates the need to make small business aware of the opportunities for export and to help them become operationally efficient and competitive in the world marketplace. De Anza College responded to the need through short courses in its Small Business Institute.

**Participating Companies**

Area Chambers of Commerce—The Private Industry Council—The Small Business Administration—The Employment Training Panel—The California World Trade Council

**Outcomes**

Two small business expansion courses and seven short courses related to international markets, importing and exporting were developed. The college expected to assist 300 persons from small businesses with their expansion problems and for 100 persons to receive instruction in international business dealings. What occured is that, try as the college might, businesses were not interested in courses dealing with business expansion and the classes failed to fill. Even though expanding businesses might need assistance they were too busy or did not recognize the need. However, instead of 100 persons being interested in courses related to international business, 417 persons enrolled in the short courses. These courses were more than fully subscribed and will continue to be offered. Curricula for both the expansion and international courses are available.

## DIABLO VALLEY COLLEGE
**Pleasant Hill, California**

### *Electronics/Telecommunications Training*

The electronics/telecommunications industry is growing rapidly in California and especially in the Bay Area. One college, Napa Valley College, implemented an electronics/telecommunications project with an Employer-Based Training grant during 1986-87, but the need for expansion of programs still existed. Thus, Diablo Valley College, in consultation with Napa Valley College, is implementing a modified model of the Napa Valley College telecommunications project. The project as proposed requires substantial investment in state-of-the-art instructional equipment if industry standards are to be met. The project is a cooperative effort between Diablo Valley College and private industry.

**Participating Companies**

Lab Volt—Tektronix—San Francisco Muni—ViaCom Cable—Gigatronics—Hewlett Packard

**Outcomes**

The college is in the process of implementing the grant and twenty four (24) persons have started training. It is expected that upgrade training will also be offered for employed personnel during the next year. The college's electronics program has dramatically updated its equipment and curriculum as a result of the project. The curriculum and equipment are integrated into the program.

Industry has donated equipment as well as provided discounts on purchased equipment. Industry has been especially helpful in equipment selection, participating in all phases of the project and providing invaluable advice on curriculum. Curriculum developed for this project is available for other colleges.

## FOOTHILL COLLEGE
**Los Altos Hills, California**

### *Computer-Integrated Manufacturing in the Semiconductor Industry*

In 1985, integrated circuit (chip) makers endured their worst recession to date. By the end of the first quarter of 1987, product delivery and new orders indicated that recovery from the slump had begun. The book-to-bill ratio had jumped to its highest level in three years. New orders were nearly double the low point of September 1985. Although this was exceedingly positive, business leaders continued to be cautious about hiring. To survive international competition, they knew they would have to improve continuously their productive processes to increase the number of working chips from each silicon wafer, cut the time to make the chips and improve design time of new products. The process needed for this to occur is computer-integrated manufacturing (CIM).

Foothill College developed the first semiconductor processing program in the mid-1970s and has continued to expand and update the programs as trends and processes changed. Working in cooperation with Monolithic Memories, Inc., Foothill College developed this project to facilitate the development of CIM in the semiconductor industry.

**Participating Companies**

Advanced Micro Devices (Monolithic Memories, Inc. was purchased by AMD)

**Outcomes**

The most significant outcome of this project was the increased productivity and improved morale among fabrication employees involved. A resource handbook was developed for employees enrolled in the training at AMD which listed all public agencies that provide education and training in the community. The training time was paid by the company and there was excellent employee involvement. Training was provided for 125 persons of various ethnic backgrounds. Currently 85 have completed their training and another 36 are still in training. All were employed at the start of training and have remained so.

AMD provided staff time and facilities to develop the curriculum and to implement the training. Employees involved in the training program were paid by the company for the time spent in training. There has been excellent feedback from employees about the project

and the productivity effect has been excellent. The program is now considered a model for other AMD manufacturing areas. Curriculum is available for others.

## *Personal Computer Service Technician Training*

Despite some economic fluctuation, the computer industry is one of the fastest growing industries in California and has a chronic need for well-trained employees. As personal computers become increasingly valuable work tools for business as well as for personal use, the need for personal computer service technicians increases. Technicians are needed in sales, as field service engineers, for technical support, as well as for installation, repair and bench service. Foothill College developed a program to provide job training experience in private sector sites through work experience, part-time employment, on-the-job training and cooperative education.

**Participating Companies**

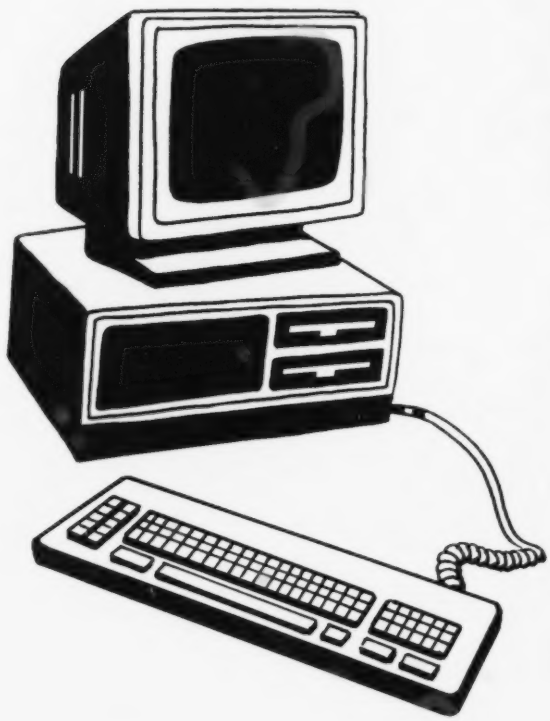
Micro-FIX—Orchid Tech—Jade Computers—ERA Electronics—IBM—Apple Computers—Laser Today—Paramount—Everex—Hewlett Packard—Xidex

**Outcomes**

Although 40 participants were planned for this program, 60 Job Training Partnership Act (JTPA) and/or Greater Avenues for Independence (GAIN) eligible participants enrolled. Thirty-eight completed training and a few are still in training. All those who completed training found jobs as well as five persons who left training prior to program completion. Trainees were from a variety of enthic backgrounds and none was employed at the start of the program.

The tutoring and internship program were the two most significant services provided which led to success of the training graduates. Tutoring for trainees was provided on a regular basis. Job search skills and career counseling were provided as a weekly activity. Company tours and speakers helped motivate participants and to get companies involved.

As a result of this program, Apple has approached the college to expand the program and include Apple PC repair. The private sector contributed equipment, assisted in the development of curriculum, the evaluation and updating of lab equipment, training of instructors and lab assistants, provided on-the-job training internships and provided full-time employment for program completers. This project has been a positive experience for the college, has been institutionalized and related courses are planned. The curriculum developed is available for others.



***As a result of this program, Apple has approached the college to expand the program and include Apple PC repair.***

***The private sector contributed equipment, training of instructors and lab assistants, provided on-the-job training internships and provided full-time employment for program completers.***

## FRESNO CITY COLLEGE
**Fresno, California**

### *Minority Entrepreneur Small Business Incubator*

Fresno City College identified in its year-long strategic planning effort the need to establish an economic development instructional program. The purpose of this program was to expand the services to businesses and industries in need of management and technical training and retraining. The EBT project was designed to serve a new clientele—the minority small business. The new clients needed a program designed for their time needs which were different from the traditional mode. They could neither make time nor wait for help. The program was designed to promote industry and labor participation in identifying small business skill and training needs and coordinate activities with other agencies assisting small business, utilize worksite based training and coordinate with existing financial resources for small businesses.

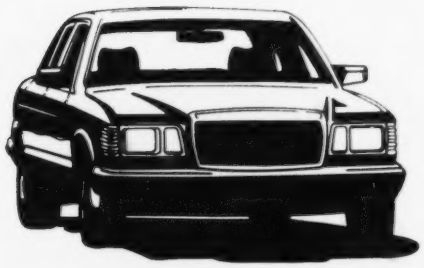
**Participating Companies**

Fresno Economic Opportunities Corporation and their incubator for minority small business persons.

**Outcomes**

This project is still in process. The small business incubator center will have 15 small businesses when fully developed. To initiate the project a series of seminars were developed and targeted at small businesses in the Fresno Enterprise Zone, Laotian Chamber, Fresno Women's Network, the Hispanic Chamber, and the Black-African Chamber as well as others. Eight topical seminars addressing small business development were held in the first series; these were expanded to include additional topics related to advertising and marketing. Thus far, 90 persons have participated in the training.

Surveys have been mailed to minority owned businesses to continue to identify clients and their training needs. Over 200 surveys have been completed. The resource base developed has included professionals in the community who are willing to work with the entrepreneurs on a reduced or no fee basis and includes attorneys, financial planners, bankers, advertising agencies, retailers, and accountants. In addition, community organizations who can provide comprehensive services have been enlisted for assistance. Most of the rural communities surrounding Fresno have approached the college and asked to participate in training for the small businesses targeted as potential incubators. Other cities outside of the Fresno area have evidenced interest.



## FULLERTON COLLEGE
**Fullerton, California**

### *Automotive Services Training Center*

Fullerton College, in collaboration with the city of Anaheim, the Motor Car Dealers Association of Orange County and the Technology Exchange Center, identified a need to established from three to five auto centers in the City of Anaheim which would house 20 to 25 new automobile dealerships. With the establishment of the new dealerships, a need for 200 trained, up-to-date new employees would be created.

The college, with the help of the auto dealers, proposed to develop and establish a new high technology automotive service training center to provide training for a skilled labor pool from which the new and existing dealerships could recruit and fill expanded positions.

**Participating Companies**

Cypress Volkswagen—Hendin Honda—Ceve Chevrolet—Fairway Ford—Mills Ford—Hansel Oldsmobile—Baner Jaguar—Roger Miller Honda—Campbell Ford—Ren Goodwill Honda—Stadium Motors—Don Stevens Chevrolet—Motor Car Dealers Association of Orange County (MCDA)

**Outcomes**

A new high technology automotive service training center was established in remodeled facilities in which new and updated equipment was installed. Donations of equipment from the automotive industry exceeded expectations. The MCDA assisted with the recruitment and screening of potential employer sponsors. The employer sponsors provided supervised and paid on-the-job training for project participants and made a commitment to full employment at the end of training. The first group of 18 trainees was enrolled in structured work experience skill training which was designed to provide 40 hours of training per week for six weeks. Trainees were provided career counseling, mentoring, remedial instruction as necessary, work experience and job placement services as part of the training program. This is an ongoing program which will continue to offer employee training for the companies listed above and with new companies as the need arises.

## IRVINE VALLEY COLLEGE
**Irvine, California**

### *Interactive 3D Computer Aided Design & Manufacturing Training*

Irvine Valley College needed to extend the existing computer aided design (CAD) program to meet the increasing demand of companies in their service area for skilled employees with a combination of computer aided design/computer aided engineering (CAD/CAE) training and education. Current employees need upgrading and new entrants will need CAD/CAE skills to be considered for employment. The proposed grant would extend work begun with an earlier grant to develop courses directed at 3D engineering design. It would provide the basis for phase two of the program which would add direct numerical control and printed circuit board autorouting. The objective is to design a computer integrated manufacturing technology (CIMT) program—complete with a work cell which integrates, a turning and machining center with robotic interface.

**Participating Companies**

Local companies serving in an advisory capacity to review curriculum, develop courses, and identify 3D engineering design needs

**Outcomes**

As a result of the grant six sections of advanced CAD courses will be available. A laboratory with IBM CATIA work stations which are compatible with industry standards exists. Fifty (50) students will have experienced campus-based and worksite training at 2½ D and 3D work stations. This program provides upgrading of design skills which qualifies program completers for job entry or helps them advance on the job. Curriculum will be available and the program is expected to be replicable at other colleges.

***. . . six sections of advanced CAD courses will be available. A laboratory with IBM CATIA work stations which are compatible with industry standards exists. Fifty (50) students will have experienced campus-based and worksite training. . .***

## LAKE TAHOE COMMUNITY COLLEGE
**South Lake Tahoe, California**

### *Small Business Improvement Center*

Many entrepreneurs with little or no training and experience in operating a business start new or acquire existing businesses in the South Lake Tahoe area. This lack of business skills has resulted in ownership turnovers of nearly 35 percent during the first year of operation. This created a need to provide training and services that would increase business success. There was a need to sustain existing jobs and create new ones which could stabilize employment as well as to identify local resources which could provide technical assistance to the inexperienced entrepreneurs. Local organizations needed to assume responsibility for local economic development. Flexible, short-term training to address these identified problems was not available. Lake Tahoe Community College, in cooperation with the Chamber of Commerce, the Economic Development Corporation and individual businesses, proposed to set up a small business improvement center (SBIC) to remedy these identified needs.

**Participating Companies/Agencies**

South Lake Tahoe Chamber of Commerce—Golden Sierra Job Training Agency—Lake Tahoe Economic Development Corporation

**Outcomes**

The project is in process and data are not yet complete. Forty (40) short-term courses/workshops have been planned to meet the needs of local business persons and at least 600 persons are expected to attend these workshops. The SBIC will develop an operational network of technical assistance for small business owners and will coordinate training options and data generated. In addition, two short courses will be developed to enhance the host training program for the hospitality industry.

*Fifteen (15) students enrolled; 10 have completed training and are now working as respiratory therapists.*

## MODESTO JUNIOR COLLEGE
**Modesto, California**

### *Respiratory Therapy Technician Upgrade to Therapist*

The labor market demand for respiratory therapists who complete a two-year program is intense and growing. The reason is that therapists are now needed where once respiratory technicians were acceptable. This has occured because more sophisticated technological skills are required to function safely in critical care areas of hospitals. Thus, both current technicians and prospective students seeking therapist certification to gain more than entry level temporary employment will need advanced skills. Although the Modesto Junior College already offered a respiratory therapy program, it needed upgrading and additions to the curriculum.

**Participating Companies**

St. Joseph's Hospital—Doctors Hospital—Memorial Hospital—Tracy Memorial Hospital—Cura-Care of Modesto

**Outcomes**

As a result of project endeavors, curriculum was enhanced, equipment added to the program, and computerized instructional review programs were made available to students for tutoring and review. The private sector contributed in cash to the program and provided many hours of supervision for the students. The program became institutionalized and self-supporting, continuing with the above hospitals and other medical facilities. Fifteen (15) students enrolled; 10 have completed training and are now working as respiratory therapists.

## MOORPARK COLLEGE
**Moorpark, California**

### *Upgrade & Retraining for Phototypesetting Workers*

The graphics industry has changed rapidly with the advent of the computer's use in typesetting. New skills are required of entry level workers and those who wish to upgrade their occupational competencies. This job market is projected to be good to very good for the next five years for those who have current, marketable skills that focus on PC-driven phototypesetting. Moorpark College proposed to develop a new typesetting curriculum which focused on PC-driven phototypesetting by utilizing existing employees of a large company engaged in upgrading its graphics operations.

**Participating Company**

UNISYS

**Outcomes**

The college was able to provide upgrade training for six employees of UNISYS in anticipation of the arrival of new, more sophisticated typesetting equipment. The company restructured its time schedule for involved employees to allow them to take training at both the college and the company site during the work day. Although equipment delivery caused some delays, the concept was good and the training was effective. A new typesetting curriculum was developed which focused on PC-driven phototypesetting in the graphics industry. The company contributed equipment, time and supplies to the project.

### *Laser Technology Applications in New Aircraft Navigation Systems*

Moorpark College operates a successful laser/electro-optics technician program. However, the use of laser/electro-optics is constantly expanding. In order to deliver a state-of-art curriculum in the area of laser/electro-optics and electronics technology, the college established liaison with Litton Aeroproducts, Inc. to upgrade employees from their current understanding of electronic aircraft navigation systems to the newly emerging laser-driven aircraft navigation systems. The curriculum resulting would be integrated into the current laser/electro-optics program.

**Participating Company**

Litton Aeroproducts, Inc.

*Southwestern College — Surgical Technology Project.*

***Twenty-one surgical technologists completed training; all completers received job offers; and 21 minimumly qualified persons at the start of training are currently employed in positions urgently needed in the community.***

**Outcomes**

Curriculum was reviewed by the Litton project staff. Eight (8) Litton students were continuously monitored through two courses: laser/electro-optics internship of 16 weeks and a computer programming course in "C" language. The beneficial effect of the upgrade training included increased skill levels and the continued employability of the employees trained, a strengthening of the competitiveness of Litton Aeroproducts by advancing its technical staff and increasing the marketability of the students who will be trained with the revised curriculum and equipment acquired as a result of this project.

## MT. SAN ANTONIO COLLEGE
**Walnut, California**

### *Registered Nurse Re-Entry Program*

There is a serious national shortage of registered nurses. Local hospitals in the Mt. San Antonio College area were experiencing a 40 to 60 percent staffing shortage in registered nurses. The shortage imposed critical staffing problems in the health care facilities. To help address this shortage, Mt. San Antonio College proposed to update the skills of inactive nurses to allow them to once again be employable in their professional field.

The college needed to purchase computers, software and equipment necessary to establish a registered nurse re-entry program which was self-paced and provided the upgraded skills necessary to re-enter and be employable in the nursing profession.

**Participating Companies**

Intercommunity Medical Center—Queen of the Valley Hospital—Kaiser Foundation Hospitals—Pomona Valley Hospital—St. Jude's Hospital

**Outcomes**

The colleges expected 30 re-entry nurses to enroll in the program. Expectations were exceeded when 45 enrolled. The hospitals provided clinical experiences and acted as preceptors for the re-entry nurses. Only six of the 41 nurses who completed training were employed at the program start. The remaining 35 re-entered the nursing profession in paid employment as a result of this project. The program has been institutionalized, related courses are planned and the curriculum is available for other colleges.

***Only six of the 41 nurses who completed training were employed at the program start. The remaining 35 re-entered the nursing profession in paid employment as a result of this project.***

## NAPA VALLEY COLLEGE
**Napa, California**

### *Training in Photoprocessing Technology*

The cutting edge in the photography industry lies in photoprocessing technology. Computers and electronics have been applied to modern photography labs. The latest techniques involve precision chemical mixing and analysis, computerized color analysis, computer graphics and printing and automatic processing machines.

A major problem facing the industry is lack of trained personnel in the new processes. Most equipment manufacturers offer condensed training packages for mini-lab owners who often do not understand the broader concepts of color theory and photographic chemistry. These owners need and will pay for staff who can produce quality work and who can troubleshoot when equipment failures stop production. These mini-labs become the high tech stepping stones for students who wish to work in larger custom labs.

The Napa area now has 15 photoprocessing labs. There are more than 200 in the San Francisco Bay area and over 600 in central and northern California. Napa Valley College proposed to respond to the need for photoprocessing technicians by developing a new photography technology program.

**Participating Companies**

CFG Color Lab—Ilford Inc.—Wing-Lynch Inc.—EPS Photo Systems—VWR Graphics—Micro Resources—Executive Photo Corporation—Eastman Kodak

**Outcomes**

This is the first college in the Bay Area to offer technical photoprocessing lab training. Equipment procurement delayed the start of the program and, therefore, the project has been extended. However, the equipment is now available and the facilities have been remodeled to meet the new demands of the program. Two courses are in process with 20 students enrolled.

The private sector companies donated equipment, provided advice on curriculum development, trained the instructor on the new equipment and provided discounts on equipment purchased with the grant. Courses are planned to continue and the curriculum will be available to other colleges upon project completion.

### *Training for Rural Small Business & Economic Development*

Economic development in Napa County is expanding at a banner rate. Rural Renaissance funds have been made available to support economic growth, the downtown shopping mall has opened, a Mainstreet USA Project is underway and business parks are attracting

new tenants. Tourism and related economic activities are expected to continue to grow. Meetings with Napa merchants suggested that retail training needs were significant. An assessment of business training and services needed indicated a widespread desire among businesses for customized training services, workshops and seminars on a variety of topics and assistance with business development and management problems. There was no formalized or easily accessible program of services available to the region's businesses.

Napa Valley College proposed to expand education and training services to the retail industry and business parks by developing, diversifying and formalizing training and services for local businesses to enable them to be more competitive, retain jobs and sustain economic growth for the Napa Valley.

**Participating Companies**

Community service organizations, such as Kiwanis and Rotary—local radio stations and newspapers—Napa Valley Bank—Queen of the Valley Hospital—Napa County Employees—Computers for Seniors—Napa City/County Development Corporation—Napa Retail Merchants' Association—Napa Chamber of Commerce

**Outcomes**

A small business center has been established. Twenty-four (24) short-term modular courses have been developed for the Small Business Center; 1,492 persons have been served to date and more courses are planned. Forty-eight (48) individuals have received one-on-one counseling and over 200 have received walk-in or call-in business assistance. All segments of the community have become involved in the Small Business Center. Community economic development agencies have coordinated services with the center. SCORE (retired executive consultants) and the private industry council (PIC) share the same small business center facilities with the college. This centralized facility has provided greater coordination and sharing of resources. However, numbers wishing to enroll in the workshops and short-term courses have sometimes exceeded the capacity of the center and some workshops are now offered at the main Napa Valley College campus.

***Response to the classes has been strong and classes are full. Students are highly motivated . . .***

## OHLONE COLLEGE
**Fremont, California**

### *Desktop Publishing*

Desktop publishing is emerging as a technology applicable to business and industry for a wide variety of purposes. Ohlone College conducted a survey which demonstrated that local businesses needed new employees trained in desktop publishing. In addition, businesses were interested in having current employees retrained and upgraded with desktop publishing skills and/or working with interns enrolled in a desktop publishing program.

Ohlone College proposed to develop a model desktop publishing project that would serve local employment needs of small businesses and provide students with marketable skills. In this process they would build linkages with area businesses, recruit trainees, set up an ongoing program and develop an internship program for students needing this type of bridge to employment.

**Participating Companies**

Apple Computer—Computer Warehouse—ERA Electronics—Holsinger

**Outcomes**

The project has been extended until January, 1989. Two courses are operating and 78 students have been enrolled. Although students have not completed training, 48 were employed at the start of training and an internship will be offered for 15 students to bridge the classroom with the world of work. Job placement assistance will be provided for others that need it. This program has been institutionalized and courses are planned for the future. Response to the classes has been strong and classes are full. Students are highly motivated and represent the business and campus segments for which the courses were designed.

Business is involved in planning and evaluation of curriculum, enrolling their employees in the program, giving technical support, and pledging internships for students.

## ORANGE COAST COLLEGE
**Costa Mesa, California**

### *Computer Automated Manufacturing (CAM)*

Industries in Orange County are moving rapidly into computer automated manufacturing (CAM). As companies purchase CAM equipment they require training for their employees. This has been particularly true in Orange County where the manufacturing base is heavily aerospace/defense industry dominated. The growth of CAM in industry can be attributed to two major factors: first, competitive pressures caused by increasing product sophistication and the inability to locate skilled people have forced industry to seek new solutions; and second, computer machining suppliers continue to provide users with an increasing number of new tools and facilities which allow them to accomplish tasks more quickly and accurately, thus reducing the time it takes to get a product to market.

The industry has shifted to powerful CAM microcomputers and altered the type of applications possible on micros, which has altered the training required for employees to productively use CAM. Orange Coast College, in response to the changing industry need, proposed to develop an employer-based CAM training program in direct cooperation with industry.

**Participating Companies**

Parker—Rexnord—Textron—Criterion—Schlumberger — NCCS — Digital

**Outcomes**

Although 300 persons were expected to enroll for training, expectations were exceeded when 549 enrolled, completed training and continued to be employed in their respective companies. The courses in CAM and computer numerical control (CNC) are planned for future offerings with new companies; curriculum from the project is available for other colleges. The project allowed upgrading of hardware and software used to teach CAM. Industry provided facilities, technical support, supplies and a part-time teacher. The project had excellent success because of increased communication with local industry and the level of sophisticated technology the college could provide.

## OXNARD COLLEGE
**Oxnard, California**

### *BMW Auto Mechanic Training*

In order to support the location of the BMW new vehicle preparation center (VPC) in Port Hueneme, California, Oxnard College, in cooperation with the City of Oxnard and the Private Industry Council of Ventura County, proposed to develop a training curriculum for entry-level BMW auto mechanics especially designed for use with new vehicle preparation. The training required was specialized to the needs of BMW and new vehicle preparation.

The new center has plans for processing 28,000 vehicles annually. It will serve as one of the pillars in the economic development of the area. Other foreign automakers are expected to use the port for off-loading new vehicles.

**Participating Companies**

BMW of North America, Inc. and the Private Industry Council of Ventura County.

**Outcomes**

Pre-training assessment and interviews were conducted with BMW staff participating to identify weaknesses in math and electronics in the students enrolling in the program. Twenty-five (25) students enrolled in the program; 20 completed; and 17 of these were hired. BMW expressed high satisfaction with the results of training and the quality of the trainees. Several of the new hires have already received promotions in their jobs with BMW. As a result of this project the courses have been institutionalized, equipment has been updated, new equipment acquired and related courses are planned. BMW aided with curriculum development; took an active interest in the training; committed staff and equipment resources to the project, including videotape training modules; and hired the program completers.

## SAN DIEGO CITY COLLEGE
**San Diego, California**

### *Automotive Computer Transmission Controls*

Change has been occurring at a fantastic rate in the automotive industry in design and engineering of the automobile. This has resulted in a critical demand for technician retraining. The San Diego City College Automotive Advisory Committee and the Automatic

Transmission Rebuilders Association (ATRA) determined a need for specialized training in transmission computer controls and engine interface for both front wheel drive automatic and standard transmissions. San Diego City College proposed to meet that need by offering a two semester training program for students and retraining and/or upgrading for working automotive technicians. The program emphasized troubleshooting techniques and repair procedures on state-of-the-art transmission computer controls and their related systems.

**Participating Companies**

Automatic Transmission Rebuilders Association (ATRA) and its local members

**Outcomes**

Thirty-one (31) students enrolled, 19 completed, and 25 were in jobs related to training. Some who left prior to completion were employed in related jobs. As a result of the project new equipment and updated equipment and facilities occurred, the course will continue with the same and new companies and related courses are planned. In cooperation with ATRA members, employees received certification and upgrading. Companies donated equipment, assisted in curriculum development, provided instructional materials and provided sites for work experience.

## *Electronic Drafting & Design for the Handicapped*

San Diego is a major electronics manufacturing center concentrating on Department of Defense contracts. The need for computer-aided design (CAD) operators has been good but the need for operators with electronic drafting and design background is excellent. There is a concomitant need to train persons with handicaps for viable jobs in substantive professions with full sustaining income potential. San Diego City College proposed to meet these two needs by providing a program specifically designed for the handicapped in the field of electronic drafting and design using computer technology.

**Participating Companies**

CADME—Naval Ocean Systems—Cubic—Computervision—Prime Computers

**Outcomes**

Facilities were remodeled and updated, new and remodeled equipment was installed and 23 students were enrolled. The program was industry-paced and proved too fast for some students. As a result future programs would need to be designed to attain industry speed over a longer period. An understanding of special problems related to disabled students involved in high tech training was a major outcome of the project. Thirteen (13) will complete, 10 within the project time period. All have been promised jobs with CADME upon completion of their program. Industry was very supportive, provided equipment, technical advice, reviewed curriculum, evaluated the program and provided placement for completers.

## *CNC/EDM Tool & Die Plastic Injection Mold Making*

San Diego County has become a major center for medical research and medical related manufacturing. Many small and large medical manufacturing companies specializing in nonpharmaceutical medical products have been locating in the area. Most products they manufacture involve plastic injection molding. The process of making molds and dies for this industry is new to the area's tool and die shops. Most of the local shops have attempted to meet the new mold making need by purchasing new specialized computer numerical control (CNC) and electro-discharge machining (EDM) equipment. This has required retraining of existing employees or hiring new employees with these skills. San Diego City College proposed to meet this need by offering a degree and certificate program in tool and die making with an emphasis in mold making.

**Participating Companies**

IMED Corporation—Prototype Model & Mold—Jet Products

**Outcomes**

Although two advanced courses were planned, CNC and EDM, only CNC was offered during the course of the project. Late arrival of EDM equipment did not allow that course to be offered; however, some of the techniques of EDM were incorporated into the other course. Twenty-three (23) students enrolled, 22 completed and 19 are working in related jobs. Both women and men students and students from varied ethnic backgrounds completed and were employed. Facilities and equipment have been updated and new equipment purchased. The college plans to continue training with the same companies and new companies, related courses are planned, the program is institutionalized and curriculum is available for others. The private sector companies provided technical assistance, assisted with curriculum development and equipment acquisition and provided on-site work experience for students in the program.

# SANTA BARBARA CITY COLLEGE
**Santa Barbara, California**

## *Telecommunications Training in Electronics/ Computer Technology*

Santa Barbara has, as have other locations in California, been experiencing rapid growth in the telecommunications industry. The need for training in the use of microwave systems was identified through the cooperative efforts of Santa Barbara City College and four high tech companies in the area. The college proposed to meet the need by establishing a telecommunications training program within the currently existing electronics/computer technology program. Personnel from diverse companies would deliver instruction to the students enrolled in the program and students would be provided with worksite training.

### Participating Companies

UCSB Communications Services—GTE—Delco Electronics—City of Santa Barbara

### Outcomes

The project has been extended until January, 1989, and, therefore, not all data related to outcomes are currently available. However, facilities were remodeled and new equipment was purchased or updated. Training was planned for 30 trainees and this was exceeded when 54 enrolled. The program is in process and being institutionalized. It will continue to be offered with the same companies, expanded to other companies, and new related courses are planned. The curriculum developed is available for other colleges. An ongoing program at the cutting edge of a new field has been established. Indications are that the continuing program will attract an increasing number of students and that placement will be good.

Private sector involvement includes worksite training, donations of equipment and personnel for instruction.

## *Cooperative Training Partnership with Tracor Aviation (and Begin Phase One of a Santa Barbara City College Business Development Center)*

Santa Barbara City College proposed to maximize resources by serving as sponsor for two projects utilizing economic development set-aside funding. Tracor Aviation identified a need for trained workers to satisfy their employment needs as they expanded. The college would establish a cooperative training partnership with Tracor Aviation to provide needed training for planned

*Ohlone College — Desktop Publishing Project.*

expansion of the company and would at the same time begin phase one of establishing a Santa Barbara City College Business Development Center which would provide training, information and referral services to current and prospective business owners and operators in a one-stop center for all necessary business development services.

Tracor Aviation's primary business is modifying and refurbishing commercial aircraft. The company expected to expand by 35 percent over 18 months. Expansion and upgrading of employees were targeted for clerical occupations, manufacturing management, computer proficiency, plant safety and human relations. Santa Barbara City College proposed to meet these needs by coordinating training and providing information/referral services within the local area.

The Tracor Training Partnership project and Business Development Center would be housed at the same site and would utilize the same administrative and support staff.

### Participating Companies

Tracor Aviation and business owners and operators needing services of the Business Development Center

### Outcomes

This project has been extended and, therefore, data related to outcomes are not yet available. At least 100 persons were expected to be trained for Tracor and 200 clients were to be served in 10 short courses related to preparing individuals to start their own businesses. Additional referral services would be available.

## SKYLINE COLLEGE
**San Bruno, California**

### *Telecommunications Fiber Optics Technology*

As the telecommunications industry changes, current jobs become obsolete and individuals must upgrade their training if they are to remain employable. Working with the Telecommunications Training Consortium, Skyline College proposed to develop an industry-specific training program for fiber optics technician. Students would include under-represented populations and under-employed individuals within the industry.

Skyline College proposed a training program which would entail 480 hours of classroom and laboratory training followed by 60 hours of work-site experience in fiber optics installation and maintenance. The program is still in process and implementation will not be complete until June, 1989.

**Participating Companies**

Pacific Bell—AT&T—Raynet, Inc.—PG&E—Inter-Tel, Inc.—Communications Systems & Services, Inc.—US SPRINT—Graydon Enterprises, Inc.—Network Equipment Technologies, Inc.

**Outcomes**

The project has been extended until June, 1989. Two courses are planned with 40 trainees enrolled. Modifications have been made to the curriculum with industry input to meet its needs. Facilities have been updated and new equipment purchased and donated from the private sector companies involved. Support from the industry has been ongoing and technical support personnel have been provided to assist in each phase of the project. The program developed will continue with the same and additional companies, is being institutionalized and has curriculum available for other colleges.

## SOLANO COMMUNITY COLLEGE
**Suisun City, California**

### *Solano County Small Business Center*

Solano County is divided into three regional areas, each tied to the city within its midst. They are Vallejo, Fairfield and Vacaville. They are old, established economic bases, each with its own distinct characteristics and clientele. As a result the county does not act as a unit when planning economic development. Each city has its own economic development plans.

Solano Community College has benefitted from being located outside these cities and is, therefore, in neutral territory. The college perceived a need for coordinated small business services in the rapidly expanding economic enterprises of the county. The college, in cooperation with the Solano Economic Development Corporation, Solano Private Industry Council (PIC), the county's chambers of commerce, local business persons and public agencies, the California Department of Commerce and the Governor's California program for economic development, undertook development of a small business center. A survey of business owners and managers identified needed educational and technical assistance.

**Participating Companies/Agencies**

Local small businesses—chambers of commerce—local newspapers—local economic development agencies—the Solano County PIC

**Outcomes**

The college expected to serve at least 400 persons through short, modular courses related to business start up. The college offered 11 workshops and 12 short-term courses which drew 916 participants by November, 1988. Many of the participants were re-entry women and minorities seeking to start their own businesses. This type of program has demonstrated a tremendous need for these services; however, these programs are difficult to sustain under current ADA restrictions of the colleges without external funds. A qualified, energetic director or coordinator appears to be a key to success and regular college funding is insufficient to maintain this position.

# SOUTHWESTERN COLLEGE

## Chula Vista, California

### *Surgical Technology*

Health care systems in California and the nation are in trouble. Costs have escalated; sophisticated technology keeps very sick patients alive and in need of highly trained care-givers; the supply of nurses is inadequate; the continued population growth in California requires additional health care facilities which must be staffed. Health care facilities are constantly searching for ways to maintain quality care while reducing personnel costs.

Southwestern College proposed to meet this need by instituting a surgical technologist program. These technologists would function in the operating room to augment the nursing staff. The program was to be 12 months in length and would impose few prerequisites and, therefore, would be suitable for Job Training Partnership Act (JTPA) and Greater Avenues for Independence (GAIN) eligible candidates.

**Participating Companies**

Kaiser Foundation Hospital—Grossmont District Hospital—Mission Bay Hospital—Sharp Cabrillo Hospital—Scripps Memorial Hospital of Chula Vista

**Outcomes**

Two surgical technologists worked with local hospitals to identify needs, obtain donations of equipment and develop the curriculum. The program was established and 30 students enrolled. Twenty-one (21) surgical technologists completed training; all completers received job offers; and 21 minimumly qualified persons at the start of training are currently employed in positions urgently needed in the community. Only 2 persons were employed at the start of training. Most of those entering and completing training were from minority groups.

New equipment was donated by hospitals and surgeons, facilities were remodeled and an ongoing program was institutionalized. The curriculum is available for other colleges and a course in perioperative nursing has been developed for the regular registered nurse program using resources made available through the surgical technology program. The advisory committee provided their operating rooms as clinical sites and provided preceptors for the trainees from their own staffs.

### *Developing an International Business Institute*

California is the largest exporter of the 50 states with over $75.5 billion of exported goods flowing through its ports. If the county were compared to states, San Diego County would rank 22nd in exports among the fifty states. The county has over 36,000 jobs associated with international trade.

Southwestern College, located within the southern part of San Diego County has within its service area a newly created federal International Trade Zone. An increasing number of foreign-born citizens live and work within the community college's service area. There has been a proliferation of international law firms, freight expediters, banking operations, a growth of multi-national corporations in the U.S.-Mexican border section of San Diego County. A dramatic growth has occured in *maquiladora* operations, firms with production operations on both sides of the border.

The college identified the need for a comprehensive international trade and small business program that offers international education and training for local businesses and technical assistance to enhance their ability to compete in international trade. Meeting this need would enhance the economic development of the area. The proposed project funded from economic development set-aside funds would establish an International Trade Institute which would serve residents and businesses in south San Diego County, prepare students and local businesses to deal with international trade problems and increase the economic well-being of small businesses located in the college's service area.

**Participating Companies/Agencies**

California Department of Commerce—U.S. Department of Commerce—San Diego Export Council—World Trade Association—local chambers of commerce

**Outcomes**

The project was not funded until late in the year and has been extended. Thus, data related to outcomes are incomplete. Activities are underway and new leased facilities are ready for occupancy in the International Trade Zone. An International Trade and Economic Day was held in September, 1988, in which over 150 interested persons attended. The college participated with other regional groups interested in foreign trade in the development and presentation of conferences in September, October and November, 1988, and small workshops are in process. The director and coordinator of the project are bilingual and have extensive backgrounds working with the community and financial institutions.

## TAFT COLLEGE
**Taft, California**

### *Instrumentation Technician Training Program, Phase 2*

An Employer-Based Training (EBT) grant in March, 1987, enabled Taft College to initiate a program for instrumentation technician. By expanding its existing petroleum technology curriculum to include a certified instrumentation technician training program, trainees would be better able to compete for jobs and upgraded training could be provided for those already employed in the field.

The college proposed to design its expanded program to meet competencies and training standards recognized nationally. It would not only meet the needs of regular college-level students, but Job Training Partnership Act (JTPA), Employment Training Panel (ETP), and Greater Avenues for Independence (GAIN) eligible students could profit from the training and become employable.

Phase 2 of the project hoped to expand entry-level career opportunities for women, minorities and the handicapped in the petroleum industry. Technical skills acquired would be transferable to other businesses outside the petroleum industry as instrumentation technicians are employed in manufacturing, agriculture, aerospace, utilities, and telecommunications.

**Participating Companies**

Instrument Society of America (ISA)—Brooks Instruments—Bechtel Petroleum—Chevron, USA

**Outcomes**

Curriculum was developed, the program was institutionalized and related courses are planned. New equipment was purchased or donated from private companies and new facilities were designed and old ones remodeled. Sixty-eight (68) trainees enrolled and 62 completed. Although the program was designed to serve a variety of groups, few students were women or from minority groups. This was in part due to the fact that many of those currently employed and upgrading were males from the white majority. However, the program did serve students who were not from the regular college student body. The local ROP enrolled 10 students and the JTPA program enrolled 15.

The local chapter of ISA assisted with curriculum development and garnered support from private sector companies. These companies donated equipment and sent employees for retraining and upgrading.

***Four hundred sixty-eight potential employees were given 12 hours of pre-employment training. . . . From this group, 230 persons were hired. These new employees were given an intensive 120-hour training course.***

## VICTOR VALLEY COLLEGE
**Victorville, California**

### *Employee Training for AFG Industries*

AFG Industries is an integrated producer, fabricator and distributor of flat glass for residential construction, remodeling and nonresidential markets. In order for AFG to locate a plant in Victorville, a trained workforce was needed. Victor Valley College proposed with assistance from an economic development set-aside EBT grant to train new employees for the new plant. The project required rapid start up and flexibility to meet the needs of the new employer. The college participated in two stages of employee development: pre-employment training for perspective employees and post-employment training for those hired.

**Participating Company**

AFG Industries

**Outcomes**

Four hundred sixty-eight (468) potential employees were given 12 hours of pre-employment training which included human relations skills, positive job attitudes, resume writing, and personality assessment. From this group, 230 persons were hired. These new employees were given an intensive 120-hour training course. The entire workforce was trained to work in a "high employee involvement" plant. Attrition, after start up of the plant, averaged only one percent per month, much lower than the industry average. AFG Industries assigned many of their supervisors to assist the college with training, supplied equipment, training materials and supplies. The company, the employees and Victor Valley College are very pleased with the results of the project. Curriculum is available for other colleges and courses are planned for future offerings.

# WEST LOS ANGELES COLLEGE
**Culver City, California**

## *Laser Fiber Optic Electronics Project*

Pacific Bell and the Communicatons Workers of America strongly endorsed a proposal for West Los Angeles College to delivery a Laser Fiber Optic Electronics program utilizing interactive video to upgrade current Pacific Bell employees. Due to diverstiture and technological upheaval within the telephone industry many employees have obsolete skills. At the same time, the laser fiber optics industry in Southern California is having to go out of state to recruit personnel. The program proposed would meet the needs of Pacific Bell to upgrade its workforce and the employees who participate would develop marketable skills which would keep them employed.

West Los Angeles College proposed to deliver the interactive video programs to identified employees of Pacific Bell who needed to upgrade their skills to remain employable.

### Participating Company

Pacific Bell

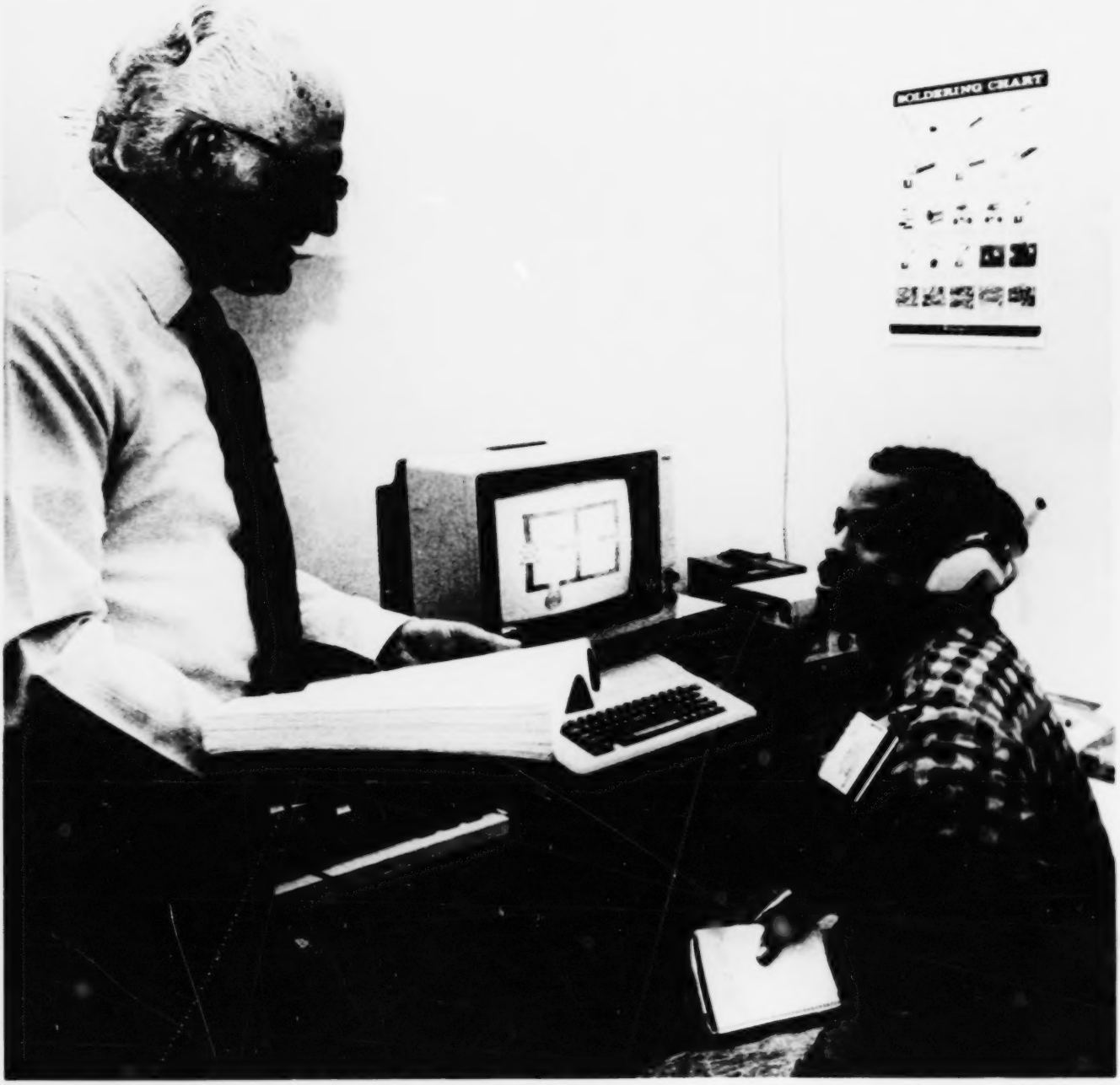
### Outcomes

Utilizing private sector facilities and existing college ones, using new and updated equipment, and integrating video materials originally developed at College of San Mateo, West Los Angeles College entered into an agreement with Pacific Bell to deliver training to 140 employees. Of these, 117 completed training and are still employed after training. Another 12 who started training but did not complete are also still employed; however, 11 who did not complete training are no longer employed with the company. Over 60 percent of the trainees were from ethnic minorities. The college plans to continue training with the same company and related courses are planned so that more employees will become familiar with the latest transmission medium—fiber optics and lasers.

**EBT Programs have demonstrated the ability of colleges:**

- **to improve industry's competitiveness**
- **to improve employment opportunities for trainees**
- **to provide on-going programs and support services to communities which help start, build and sustain business growth and economic development.**

# COMPANIES COOPERATING WITH THE COLLEGES IN IMPLEMENTING EBT PROJECTS, 1987-88




*West Los Angeles College — Laser Fiber Optic Electronics Project.*

**COMPANIES COOPERATING WITH THE COLLEGES IN IMPLEMENTING EMPLOYER-BASED TRAINING PROJECTS, 1987-88.**

## A

Advanced Micro Devices
AFG Industries
Antelope Valley Press
Apple Computers
AT&T
Automatic Transmission Rebuilders Association (ATRA)

## B

Banner Jaguar
Bechtel Petroleum
BMW of North America
Brooks Instruments

## C

CADME
Campbell Ford
Ceve Chevrolet
CFG Color Laboratory
Chef Managers Association of Coachella Valley
Chevron, USA
City of Santa Barbara
Communications Systems & Services, Inc.
Computer Warehouse
Computers for Seniors
Computervision
Criterion
Cubic
Cura-Care of Modesto
Cypress Printing
Cypress Volkswagen

## D

Delco Electronics
Digital Electronics Corporation
Disneyland
Doctors' Hospital
Don Stevens Chevrolet

## E

Eastman Kodak Company
ERA Electronics
Everex
Executive Photo Corporation

## F

Fairway Ford
Fresno Economic Opportunities Corporation

## G

Gigatronics
Graydon Enterprises, Inc.
Grossmont District Hospital
GTE

## H

Hansel Oldsmobile
Hendin Honda
Hewlett Packard
Holsinger
Hotel Sales Managers Association of Coachella Valley
Hyatt

## I

IBM
Ilford Incorporated
IMED Corporation
Instrument Society of America
Inter-Community Medical Center
Inter-Tel, Inc.

## J

Jade Computers
Jet Products

## K

Kaiser Foundation Hospitals

## L

La Quinta Hotel
Lab Volt
Laser Today
Litton Aeroproducts, Incorporated

## M

Marriott
Maxim's de Paris Suite Hotel
Memorial Hospital
Micro-Fix
Mills Ford
Mission Bay Hospital
Motor Car Dealers Association of Orange County

## N

Napa County Employees Association
Napa Retail Merchants' Association
Napa Valley Bank
Napa Valley Chambers of Commerce
Napa Valley Vintners' Association
NCCS
Network Equipment Technologies, Inc.

## O

Orchid Technology

## P

Pacific Bell
Paramount
Parker
PG&E
Pomona Valley Hospital
Prime Computers
Prototype Model & Mold

**Q**

Queen of the Valley Hospital

**R**

Ramada Inn
Raynet, Inc.
Rexnord
Roger Miller Honda
Ron Goodwin Honda

**S**

San Francisco Muni
Schlumberger
Scripps Memorial Hospital of Chula Vista
Sharp Cabrillo Hospital
Stadium Motors
St. Joseph's Hospital
St. Jude's Hospital

**T**

Tektronix
Textron
Tracor Aviation
Tracy Memorial Hospital

**U**

UCSB Communications Services
UNISYS
U.S. Naval Ocean Systems
US SPRINT

**V**

Viacom Cable

**X**

Xidex

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